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CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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SECURITY INFORMATION

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THE SOURCE EVALUATIONS IN THIS REPORT ARE DEFINITIVE.
THE APPRAISAL OF CONTENT IS TENTATIVE.
(FOR KEY SEE REVERSE)

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25 YEAR RE-REVIEW

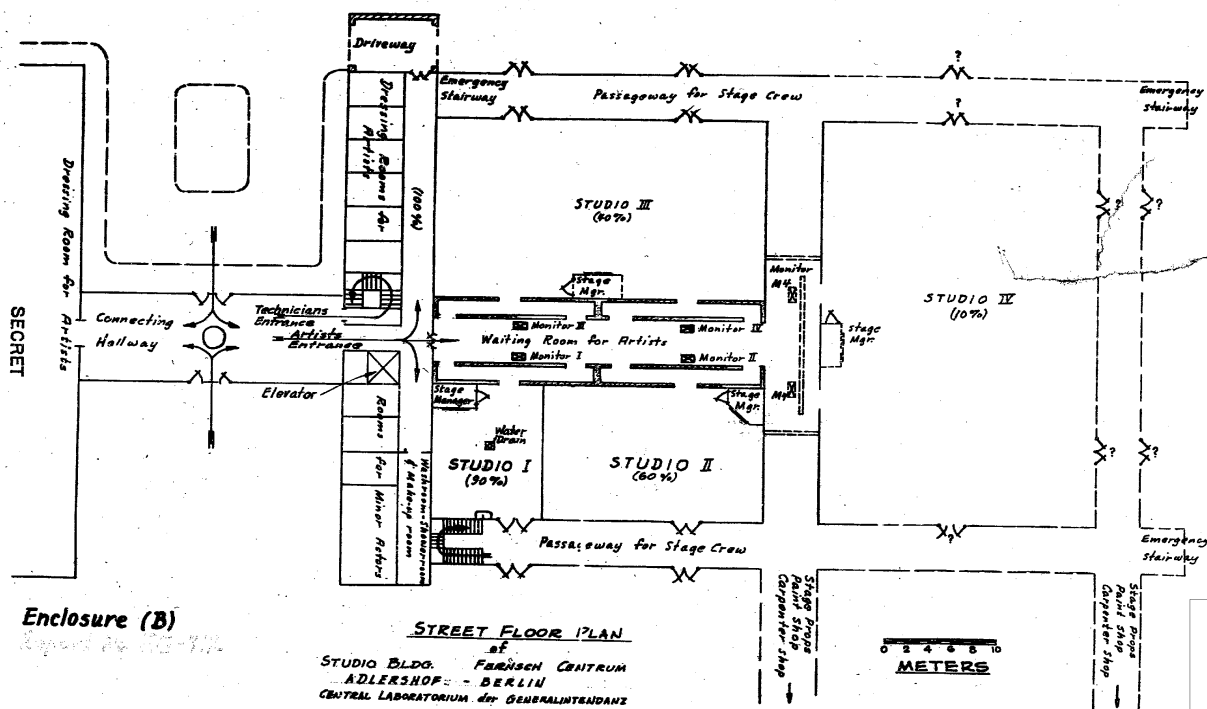
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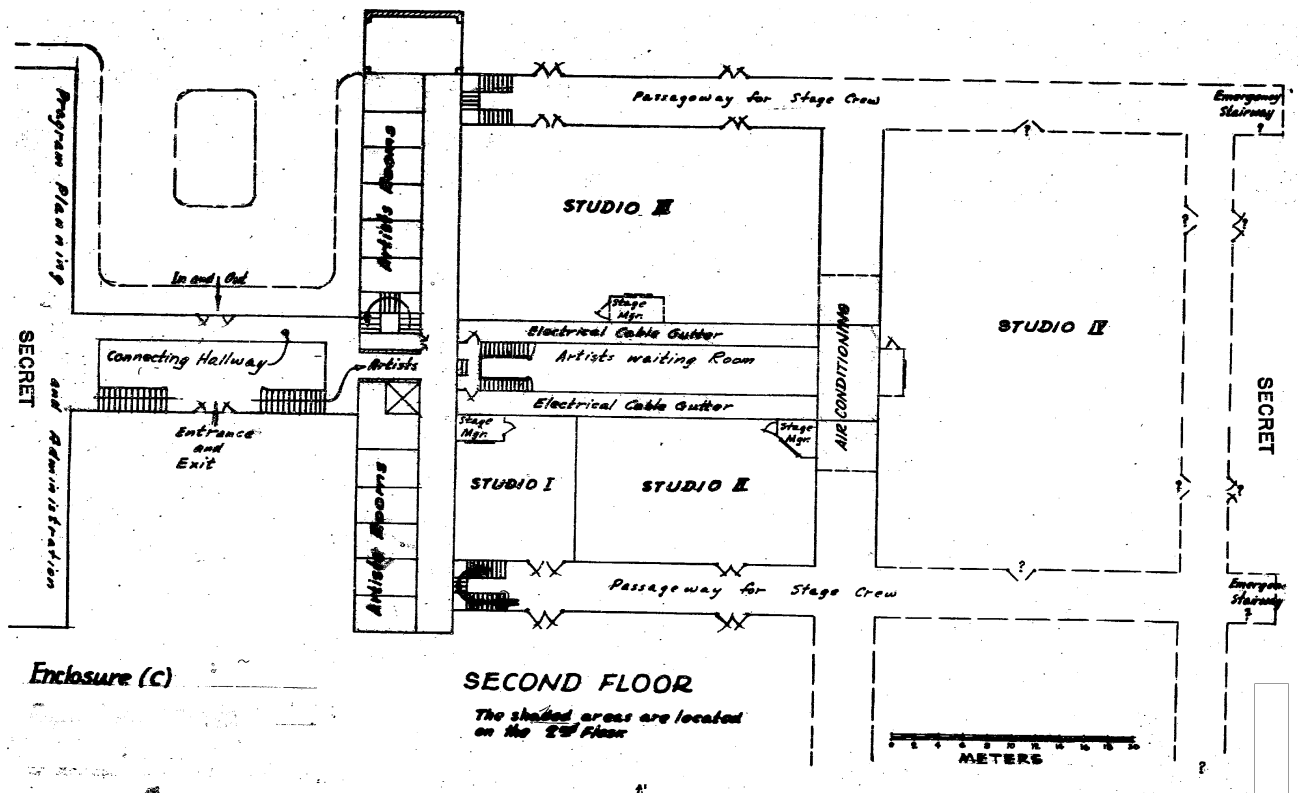
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STATE	X	ARMY	X	NAVY	X	AIR	X	FBI		AEC		ORR EV	X	OSI EV	X
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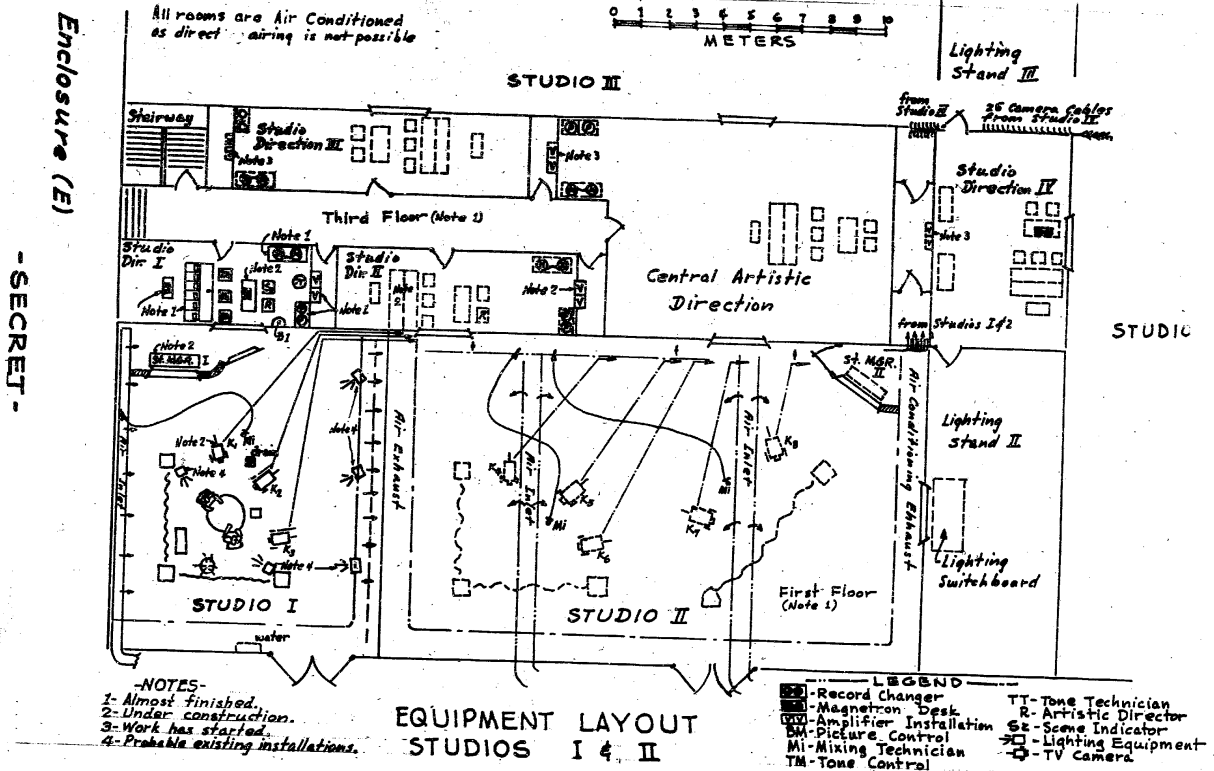
(Note: Washington Distribution Indicated By "X"; Field Distribution By "#".)

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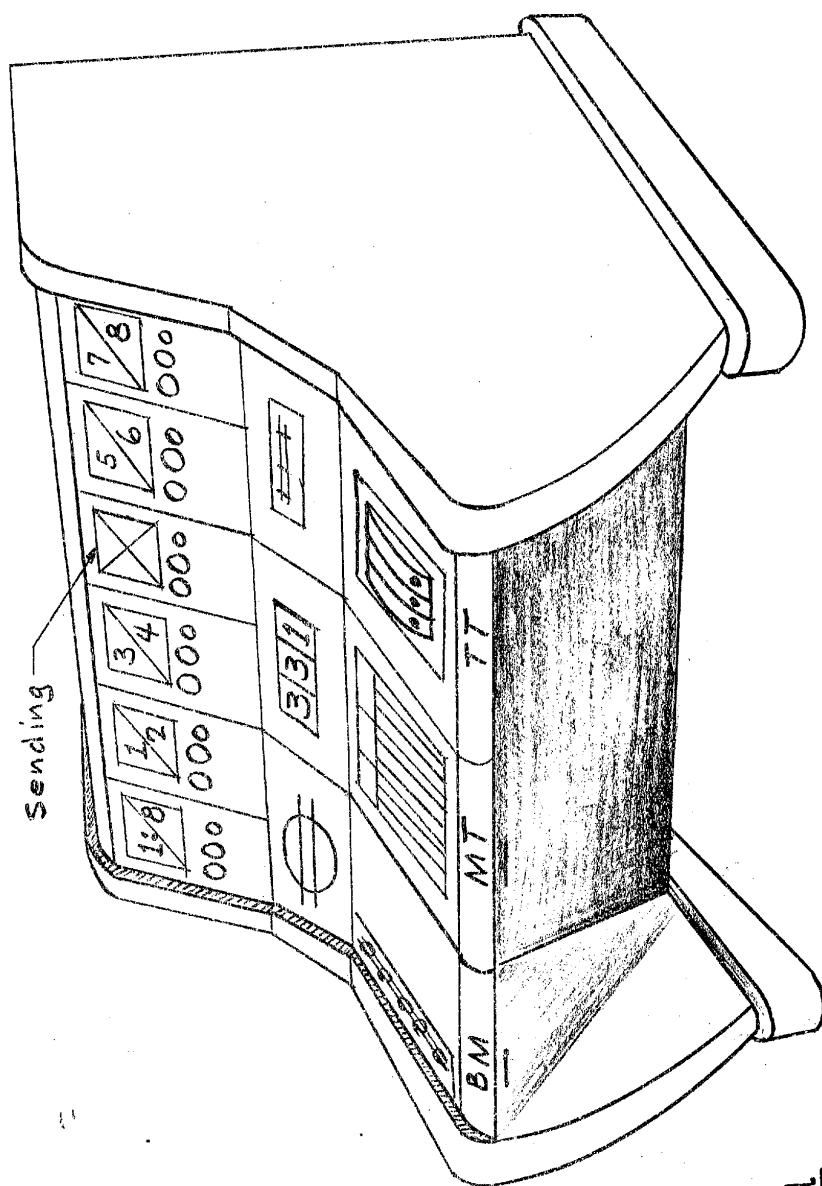


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MASTER TABLE

Legend

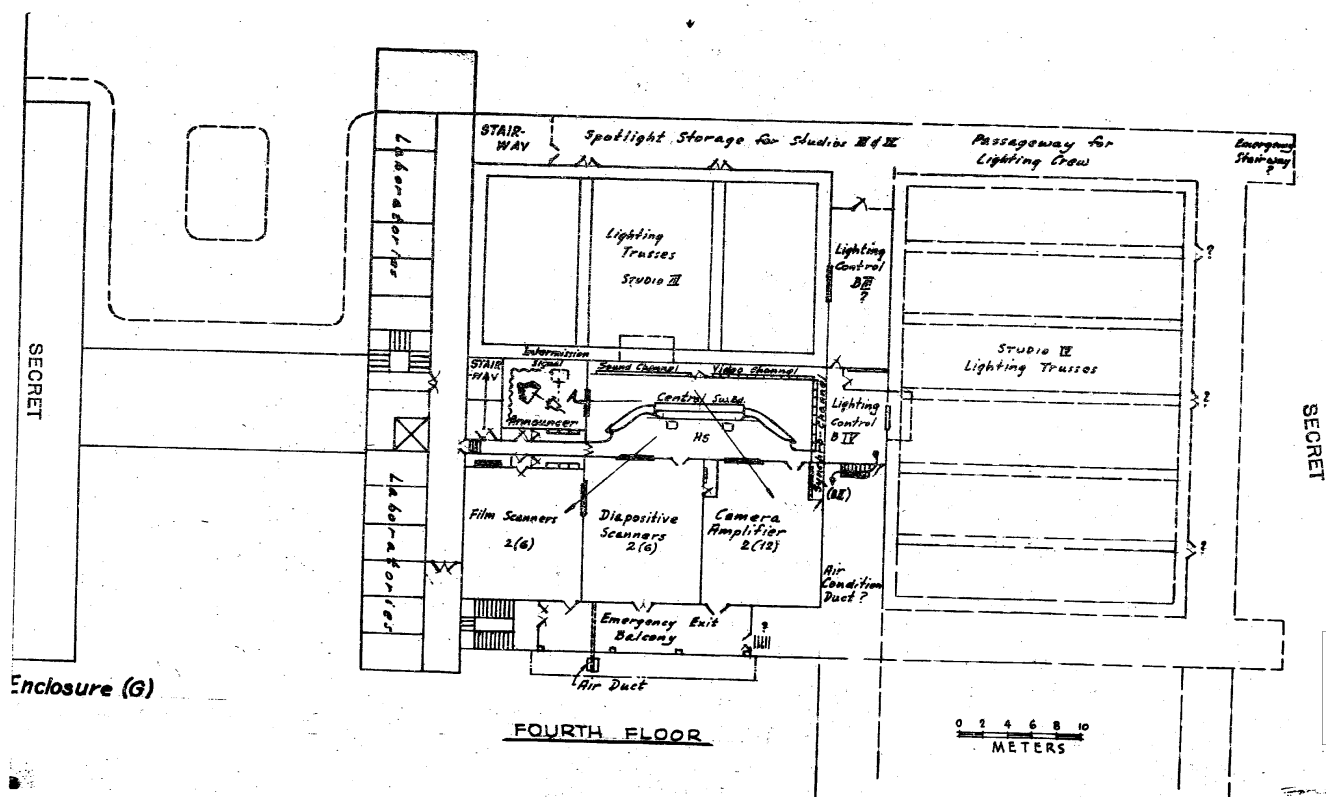
BM = Picture Control Tech.

MT = Mixing Tech.

TT = Sound Control Tech.

Enclosure (F)

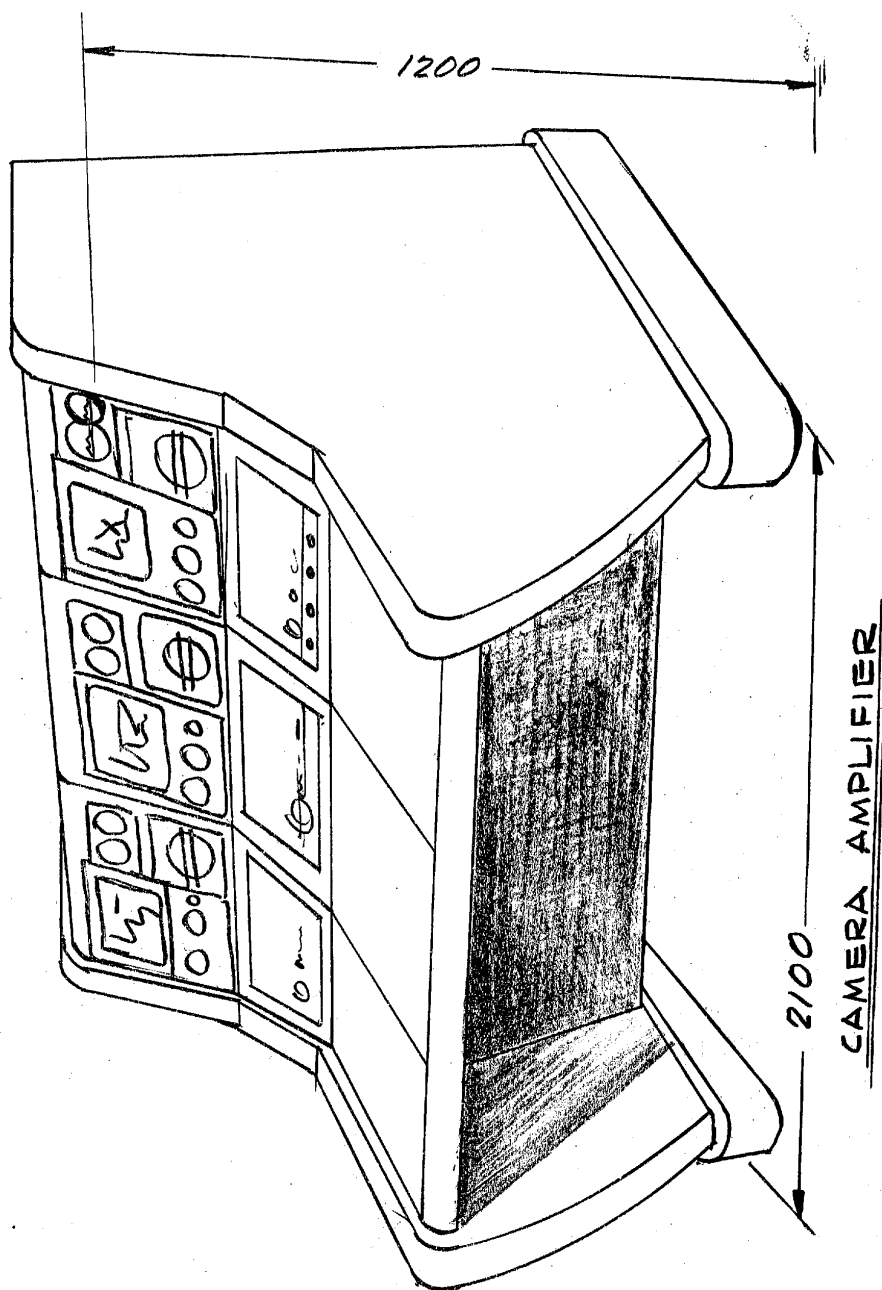
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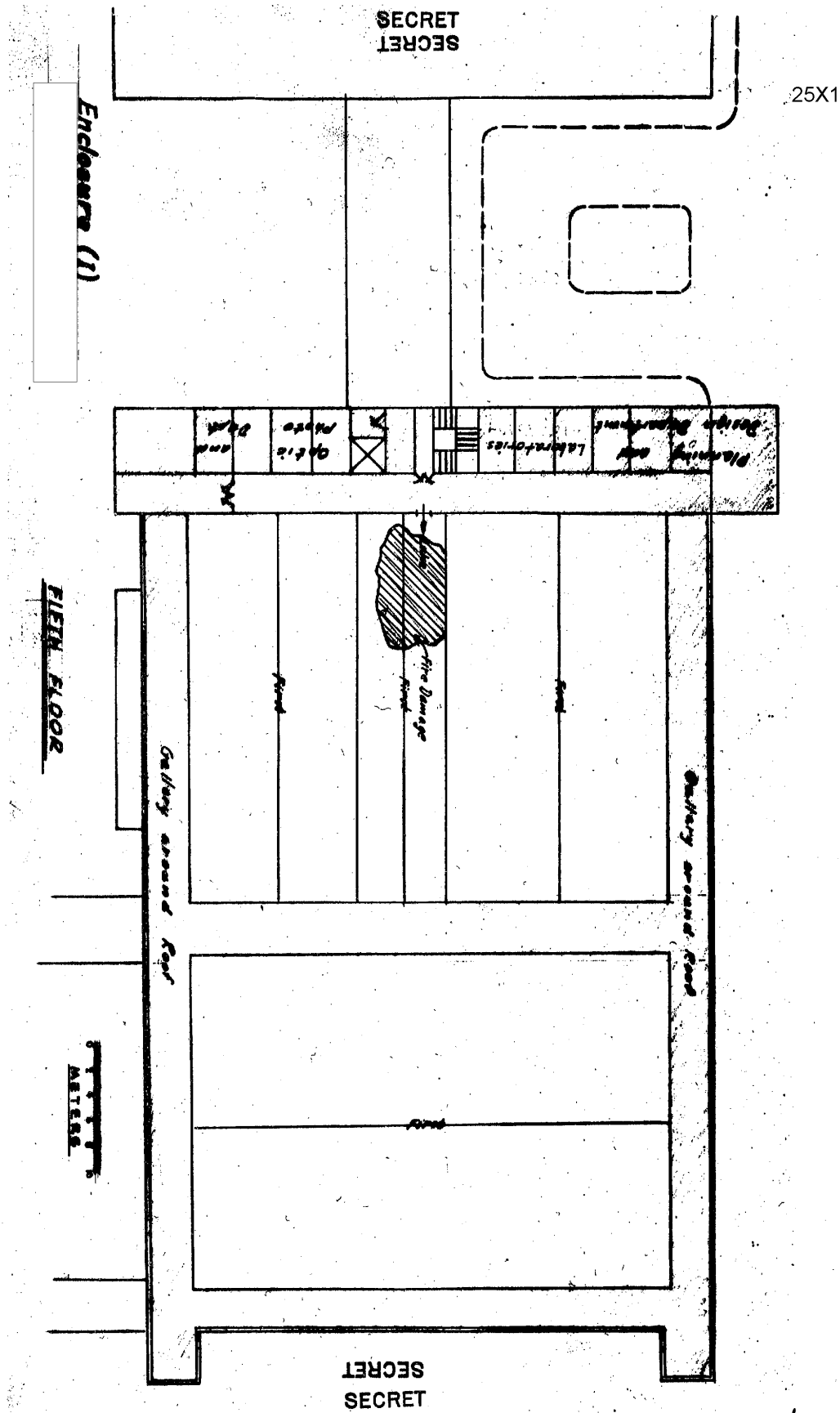


Enclosure (H)

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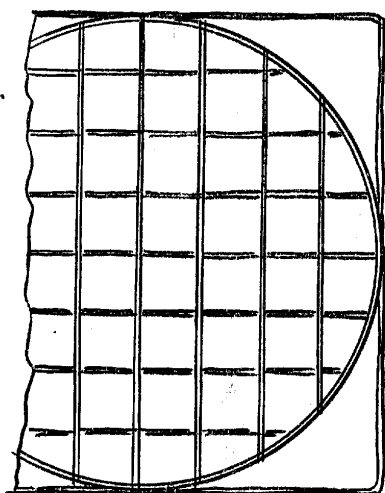
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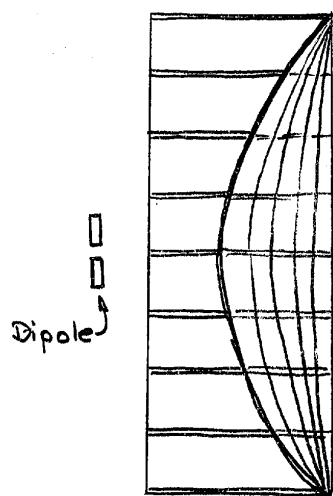
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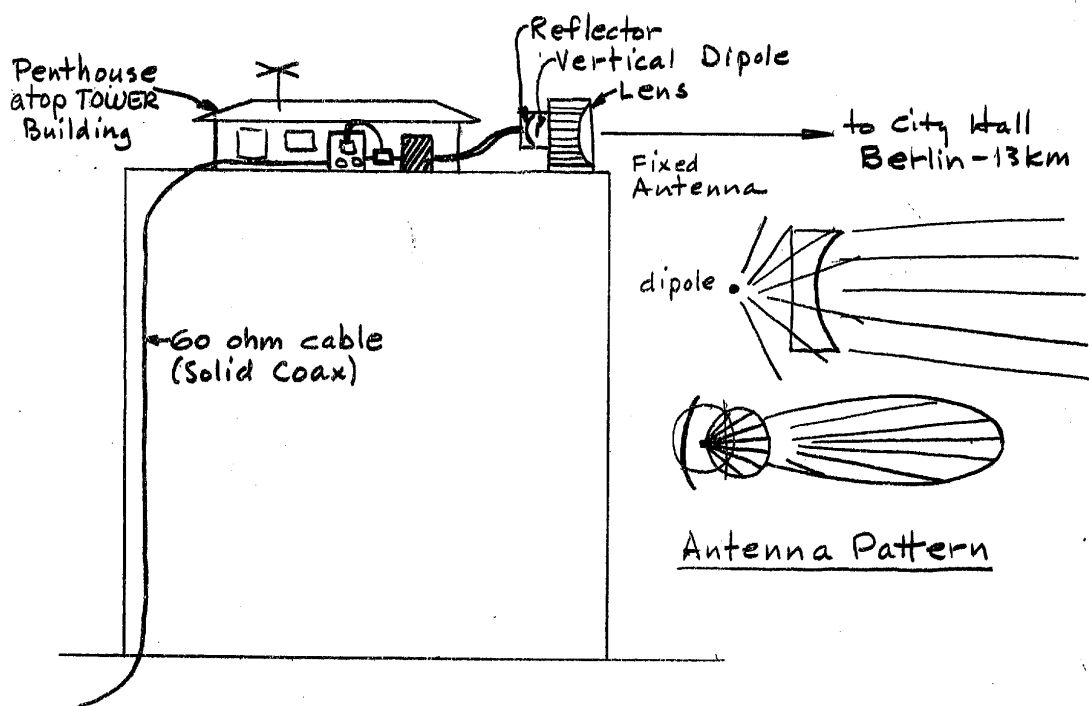


Front View



Side View

DETAIL of ANTENNA (LENS)



ANTENNA LAYOUT- PATTERN & DETAIL

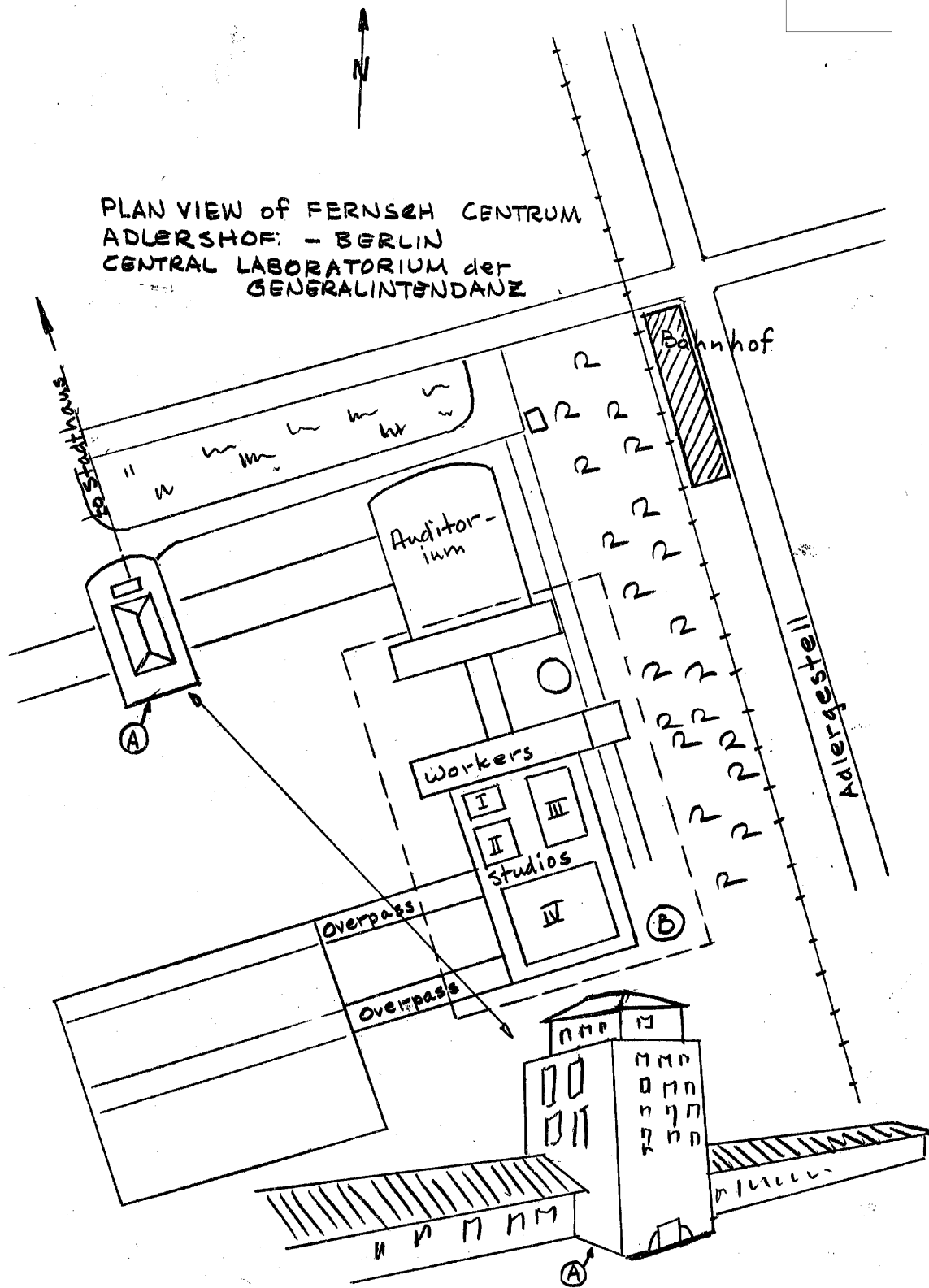
Enclosure (J)

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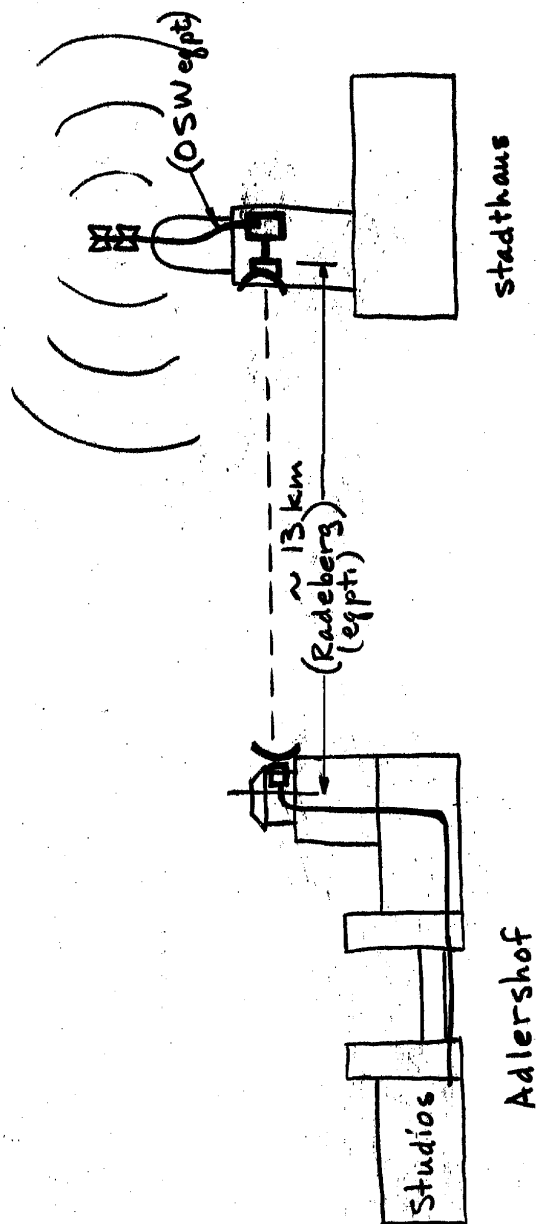
Enclosure (K)

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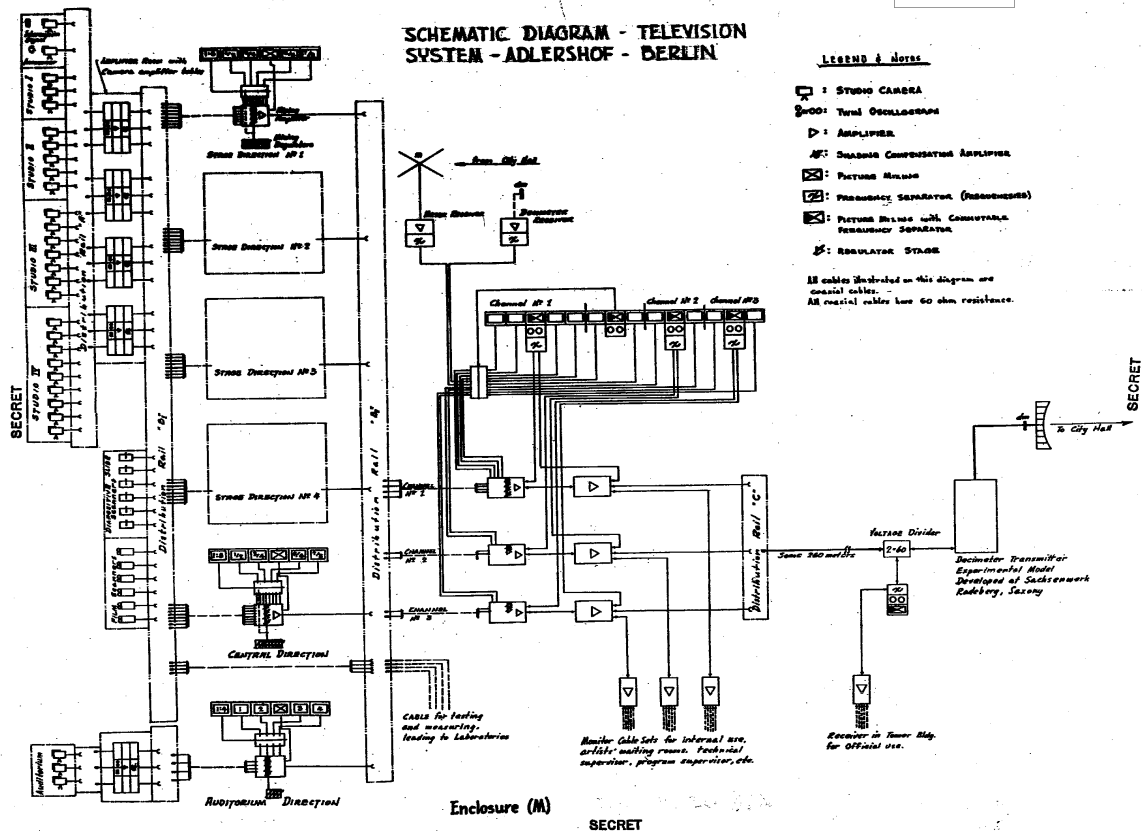


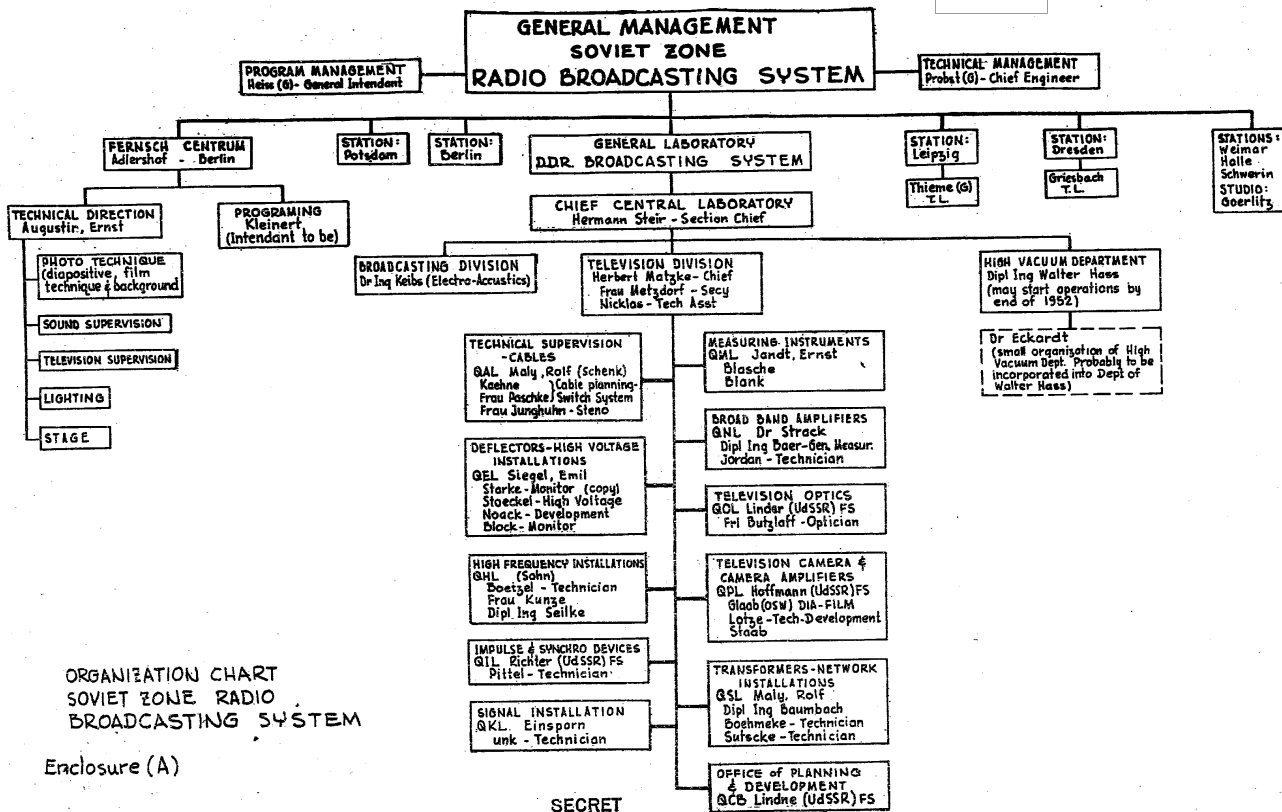
ORIENTATION of ADLERSHOF & BERLIN STADTHAUS ANTENNAE

Enclosure (L)

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INTRODUCTION

1. [] Adlershof, Berlin, will be the only television center of the Soviet Zone of Germany. All SovZone television programs will undoubtedly originate at Adlershof, from where they will be transmitted to other cities via relay stations. [See Enclosure (A), an organization chart of the Soviet Zone Radio Broadcasting system.] 25X1
2. The Soviets nominally expressed great interest in German television efforts but [] this was done merely for its propaganda value. In general, the Soviets exercised little control over German television work in the Soviet Zone although they did force the Germans to lower their broadcasting frequency from 200 to 100 megacycles (99.6 to be exact). Obviously this was done to prevent reception of transmissions from the Western Zone of Germany. To comply with the Soviet demand, OSW, which provided crystals for the transmitter, had to procure new ones. [] OSW had considerable difficulty in obtaining these new crystals. 25X1
3. The Soviets planned to install two transmitters in the Stadthaus, located in the Soviet Sector of Berlin; one transmitting on 100 megacycles to the Soviet Sector and one transmitting on 200 megacycles to the West.
4. The high frequency transmitter which beamed the program to the Stadthaus was produced by the Sachsenwerk, Radeberg, Saxony; the transmitters in the Berlin City Hall were produced by OSW. [See Enclosure (K), Plan View, Fernseh Centrum, Adlershof and Enclosure (L), Orientation of Adlershof and Berlin Stadthaus antennas. On Enclosure (K), "A" pinpoints the perspective of the Tower Building in Adlershof and "B" the plot plan.]
5. [] the radio stations listed below were the only ones located in the Soviet Zone of Germany. With the possible exception of Leipzig, [] television was contemplated for these stations. 25X1
- a. Radio station Potsdam, located 30 km. southwest of Berlin. [] 25X1
 - b. Radio station Berlin-Koepenick. The transmitter and masts were located in Koepenick. [] 25X1
[] 25X1
 - c. Radio station Leipzig which had medium short wave. The studios were located in the center of the city and the transmitter was in Wiederan. [] Berlin-Adlershof may use Leipzig as a relay station for television but not for a few years. 25X1
 - d. Radio station Dresden which was only of local importance.
 - e. Radio stations Weimar, Halle, Schwerin and studio Goerlitz. These were very small transmitter stations; as indicated, the latter was only a studio.

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TELEVISION CENTER, ADLERSHOF, BERLINTower Building

6. The General Laboratory of the DDR Broadcasting system, under the general management of the Soviet Zone Radio Broadcasting system, had jurisdiction over the radio and television laboratories for the Soviet Zone of Germany [see Enclosure (A)]. These offices were housed in the Tower Building, Adlershof, Berlin.
7. The High Frequency Department was located on the top floor of the Tower Building.
8. The High Vacuum Department, as of August 1952, was installed in the Tower Building. This Department was to occupy the entire building when the Broadcasting Division moved [redacted] Dr. ECKARDT was Chief of the High Vacuum Department. [redacted] this department was the only section at Adlershof which was engaged in research and development. The High Vacuum laboratory was to begin a small production line of secondary emission multipliers, approximately 10 sets in all.

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Studio Building

9. The transmitting of television programs was to be done by employing decimeter relay stations, having as their center the studios at Adlershof. The four studios of the Studio Building were designed to be equipped with 25 cameras. Studio I was to have three cameras, Studio II, five, Studio III, seven, and Studio IV, ten. [See Enclosure (B), Equipment Layout of Studios I and II located on the street floor (Erdgeschoss)]. [redacted] Studio I was completed to a point where operations could be started early in September 1952; the construction of Studio II had been completed but none of the television equipment had been installed and therefore, was only capable of recording radio programs. The other studios were to be completed by 1957.
10. The Studio Building was connected with the Administration Building by a two-story passageway through which the artists and technicians could enter both buildings. The artists' dressing rooms and waiting room were also located on the street floor; there were additional dressing rooms on the second floor [see plan of the second floor, Enclosure (C)]. Technicians entering the Studio Building had to use a different staircase than the artists because they were not permitted on the first two floors of the building; the artists were not permitted beyond the second floor.
11. A room for the stage manager (Inspizient) was located in each of the studios. The rooms next to the entrances to the artists' waiting room were soundproof and were connected by a two-way speaker with all artists' rooms.
12. The artists' waiting room was large and had a ceiling two floors high. Monitor sets, which enabled the artists to follow the progress of the program, were located on tables in the four corners of the room. Attached to these monitor sets

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were scene indicators which made it possible for the artist to see at a glance how far the performance had progressed. The waiting room was equipped with a dim reddish light which, while permitting the artists to follow the performance on the television, protected their eyes from being strained before their entrance onto the stage.

13. To proceed from the artists' waiting room to the studio, the artist had to pass through a corridor which was completely soundproofed. (The soundproofing materials were glasswool, leather and wickerwork.) At the entrance to the studio the artist was met by the stage director's assistant who supervised the timing of the actors' entrances (and exit). [redacted] no intercommunication system existed between the stage director and his assistant while the performance was in progress but [redacted] it was planned for the future.
 14. Signal lamps were posted at all entrances to the studios. A red light indicated that a play was in progress, a blue light indicated that a rehearsal was going on.
 15. When a change of scene was necessary, the actors left the stage in the direction of the artists' waiting room and the stage hands came in from the outer passageways. These passageways connected the Studio Building with the workshops and the storage rooms which housed the stage props and requisites. The outer passageway for the stage crew was a high-ceilinged corridor. (The ceiling was high so as to permit an elephant with mount to pass through without difficulty.) The outer passageways were soundproof. The stage hands hung the scenery on a scaffold which was erected in the studio and which could be moved about on wheels. The scaffold consisted of three columns on which spotlights with narrow beams were installed; these were used to accentuate the light on the actor's eyes, cheeks, etc..
 16. The cameras were mounted on movable racks and could be elevated or lowered. At the time of my departure the only camera already installed lacked the iconoscope tube; this camera was otherwise completely equipped. The camera cables were strung over wheels along the ceiling to the upper right corner of the studio.
 17. A movable microphone was suspended over the stage. Its cable connected with the amplifier table. [redacted]
 18. The studio had both water and gas connections. A water drain was installed in the center of Studio I.
- The Second Floor [See Floor Plan, Enclosure (C)]
19. As previously mentioned, additional dressing rooms for the artists were located on the second floor of the Studio Building, in the north wing. The cable ducts which led to the control and amplifier tables were located on the second floor. These ducts entered the tables from the bottom and were about 1.80 - 2.00 m. high and 1.50 m. wide. Also installed on the second floor was the air condition unit (air circulation type) which had been made at Nagema¹ in Goerlitz.
- The Third Floor [See Floor Plan, Enclosure (D)]

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20. The roof of the passageway connecting the Studio and Administration Buildings was built as a walk which was used by the technicians and the staff of the Technical Director. The offices of the Technical Director and of the Planning and Development Department (Betriebsleitung), which was in charge of the laboratories, were located in the north wing of this floor. Also located on the third floor were the rooms of the artistic (stage) directors.
21. The stage director's room was equipped with the following installations:
- a. The Master Table [see Enclosure (F)]
The master table was equipped with six television screens and manned by three technicians--the sound control technician (TT); the mixing technician (MT); and the picture control technician (BM). The sound control technician monitored the picture on two screens on which he could receive four previews since each screen had two channels. He could control the sound by giving it the desired volume by switching the microphones on and off and by giving directions to the technicians in the studio. The mixing technician could receive the picture on the screens on which he could also receive four previews. On the other screen he saw the mixed picture which was transmitted. The picture control technician, connected with the technical personnel in the studio by a two-way speaker, could switch all eight channels on his screen and had the control of all eight channels. He was in charge of the technical perfection of the pictures. The picture channels which transmitted the previews to the monitor screens were flat track regulators (Flachbahnregler), two of which produced one picture. The number of the scene which was in progress appeared on the table in front of the mixing technician.
 - b. The Table of the Scene Indicator [see Enclosure (E)]
The scene indicator followed the script book as it was divided into scenes and transmitted the scene numbers to the artists' dressing rooms, the stage crew, the artists' waiting room and the master table.
 - c. The Table of the Stage Director (Artistic Director) [see Enclosure (E)]
The stage director could follow the play on the screen on his table. He only saw the mixed picture which was transmitted. From his place he could also watch the master table and proceedings in the studio, as all studios had windows overlooking the studios. The stage director had a two-way connection with the studio which enabled him to give stage directions from his table while a rehearsal was in progress.
 - d. Twin Record Changer [see Enclosure (E)]
 - e. Central Director's Room [see Enclosure (E)]
The central director's room was equipped in the same manner as the other directors' rooms. It had two windows which overlooked Studios II and III. In this room the direction of any of the four studios could be taken over, thereby automatically cancelling that of other directors. From the central director's room it was also possible to direct one performance staged in more than one studio.

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22. The spotlights used by the lighting crew were also located on the third floor. These spotlights were fastened on rails and could be moved manually. The lighting was controlled by main switchboards (Beleuchterstaende). [redacted]

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a
scene indicator will be installed in the switchboards. The spotlights were not to be fastened on the galleries in Studios III and IV. Rather, trusses were built across the studio rooms from which the lighting was to be handled. [redacted]
Studio III was designed to have two trusses and Studio IV was to have five trusses.

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23. Other installations on the third floor were the amplifiers for the microphones and the outer passageways which were being used for storing lighting equipment.

The Fourth Floor [See Floor Plan, Enclosure (G)]

24. Laboratories for the development of television parts were located in the north wing of this floor.

25. The primary installation located on the fourth floor was the main switchboard which had 14 monitor screens and from which transmissions of the shows were controlled. Windows connected the main switch room with the film transmittal room, the diapositive transmittal room and the camera amplifier room. Six film transmitter sets were planned, of which only two had been installed; six diapositive transmitter sets were also planned and only two of these had been installed. Only two of twelve projected camera amplifiers [see Camera Amplifier, Enclosure (H)] were installed. The camera amplifiers were tables, each of which was equipped with three separate amplifier units. Each unit consisted of a shading compensation amplifier, i.e., a twin oscillograph which indicated the intensity of the picture and its lines. The observer could watch the picture on a screen as it was transmitted. A master loudspeaker was installed in the table which connected the camera amplifier both to the cameras and to the desk of the stage director. Each camera could be connected with each amplifier unit through a distribution rail which was equipped with commutation switches.

26. Three channels emanated from the main switchboard: The sound channel, the picture channel and the synchronization channel. A small walk behind the channel boards permitted the making of repairs without disturbing the progress of a performance.

27. A fire destroyed the announcer's room and part of the main switch installation in January 1952. The fire apparently had started in the announcer's room and since the building had a wooden roof, and also was lined with soundproofing material, the fire spread. Fortunately it was discovered in time to prevent greater damage, but the entire switch installation had to be removed, and a new roof had to be constructed. This work, particularly the new switch installation, had not been completed

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28. The main lighting stands of Studios III and IV were also installed on the fourth floor. Lighting equipment was stored in the outer passageways.

The Fifth Floor [See Floor Plan, Enclosure (I)]

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25X1

29. The laboratories of the Optic and Phototechnic Departments and the laboratories of the Planning and Development Department were located in the north wing of this floor. Also on this floor were walks on the outer edge of the roof.

The Antenna

30. [redacted] 25X1
- shown on the sketches [see Enclosure (J) and (M)]. The antenna consisted of a round, sheet metal body. The inside was divided like a honeycomb, the cells of the honeycomb being of different lengths; the cells in the center were the shortest. The dipole in the decimeter frequency, probably equipped with a reflector, was located behind the antenna.

Wiring

31. The schematic wiring diagram of the complete Adlershof Television system is shown on the accompanying sketch [Enclosure (M)].

Material Shortages

32. At Adlershof, difficulties were encountered in procuring materials, especially pipes and cables for high tension wiring, which were extremely scarce. [redacted] priority was very low [redacted] not even assigned a number and it was almost impossible to purchase new materials for equipment without a number. Most of the materials [redacted] received had been taken from old stock in the Soviet Zone. Even so, the Soviet Zone government professed great interest [redacted] 25X1
33. [redacted] the following shortages existed [redacted] at Adlershof: 25X1
- a. Iconoscopes. These were being developed by Dr. ECKARDT and Dipl. Ing. HASS, but had not been completed. It was estimated that iconoscopes might be available in 1952-53.
 - b. Amplifier tubes used in the television camera. [redacted] 25X1
[redacted] 25X1
The RFT in Erfurt, Germany, was trying to develop miniature tubes for cameras and defectors but [redacted] has been unable to do so. 25X1
 - c. Tubes called the "gnom tubes", such as the high voltage type DY-O-1 and the ECC-171, a double triode, in addition to synchronous motors; also the EDD-171 double triode tubes with higher capacity.
 - d. The EL-171, EL-172, which were under development. These were to correspond to and replace the EL-11 and EL-12 used in the impulse generator. The EL-17525, under development, was to be used in deflector devices.
 - e. Deflector tubes for the monitor tubes and iconoscopes. These required a specially pressed iron called Manifer-V which was obtained from Hescho in Hermsdorf, Thuringia, Germany, and which was very scarce.
 - f. Resistors. These were made by the Dralowid firm in Berlin-Teltow.

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- g. Sheet iron used in transformers. However, old transformers were being dismantled and the iron re-used for this purpose.
- h. Copper wires used in transformers.
- i. Stabilizers for neon lamps. These came from Pressler in Leipzig.
- j. The 60-ohm coaxial cables used for the video signal and the 150-ohm coaxial cables used for the synchro impulse; these were very scarce. These originally had come from the Vacha firm in Rhoen, Germany, but were later shipped directly to the USSR.
- k. Coaxial connectors (Siemens type) were very scarce particularly because ceramics, in very short supply, were used. The ceramics for these connectors came from the Hascho-Kahla-plant, Hermsdorf, Thuringia.
- l. The spring-type banana plug made of bronze was no longer available; a substitute was being sought.
- m. Picture tubes. A shipment of 50 picture tubes for the monitors had arrived from OSW, Berlin, in about July 1950, but this company never shipped any more to Adlershof because their production of this tube was primarily directed to the USSR.

- ENCLOSURE (A): Organization Chart - General Management - Soviet Zone Radio Broadcasting System
- ENCLOSURE (B): Street Floor Plan, Television Studio Building, Adlershof, Berlin
- ENCLOSURE (C): Second Floor Plan, Television Studio Building, Adlershof, Berlin
- ENCLOSURE (D): Third Floor Plan, Television Studio Building, Adlershof, Berlin
- ENCLOSURE (E): Equipment Layout - Studios I and II at Adlershof, Berlin
- ENCLOSURE (F): Master Table
- ENCLOSURE (G): Fourth Floor Plan, Television Studio Building, Adlershof, Berlin
- ENCLOSURE (H): Camera Amplifier
- ENCLOSURE (I): Fifth Floor Plan, Television Studio Building, Adlershof, Berlin
- ENCLOSURE (J): Antenna Layout, Pattern, and Detail
- ENCLOSURE (K): Plan View - Fernseh Centrum, Adlershof, Berlin
- ENCLOSURE (L): Orientation of Adlershof and Berlin, Stadthaus Antennas
- ENCLOSURE (M): Schematic Wiring Diagram - Television Studios, Adlershof-Berlin, Germany (SovZone)

- 1. Comment. Possibly VEB Luft- und Waermetechnik Goerlitz, VVB NAGEMA, is meant.

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